

II. REMARKS

A. ELECTION/RESTRICTION

In response to the election/restriction requirement, Applicants confirm election of Species I, claims 5-27.

B. Claim Rejections - 35 USC 102

Claims 5-7, 9, 11 and 16 were rejected in the Office Action under 35 UCS 102(e) as unpatentable over Hubbard (US 2003/0219564).

Applicants respectfully request reconsideration and withdrawal of this rejection for the following reasons:

As noted in MPEP 2131: "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." ... "The identical invention must be shown in as complete detail as is contained in the ... claim." The elements must be arranged as required by the claim... " (citations omitted).

Hubbard does not anticipate each and every element of the rejected claims 5-7, 9, 11 and 16, and therefore does not provide proper foundation for rejection of such claims under 35 UCS 102(e).

The present invention relates generally to a tape to bridge a gap between roof membranes of adjacent building modules.

Hubbard is a single-ply roofing membrane with a water impermeable membrane and a pressure sensitive, hot-melt adhesive adhered to one side of the membrane for application to a roofing deck and/or a parapet wall to form a water impermeable membrane (P-0008, lines 3-7, P-0009). Hubbard clearly identifies the "roof deck" is the "structural supporting surface of a building extending between the surrounding exterior walls of the building." (P-0004, lines 1-4).

Thus, Hubbard concerns a roof membrane that would be applied to building modules, not the gap between building modules, which gap the tape according to the present invention would bridge.

Claim 5:

The basis for the rejection of claim 5 in the Office Action reads:

"In regards to claim 5: Hubbard teaches a self adhering membrane for roofs that is capable of bridging a gap between adjacent building modules and to sealably engage adjacent generally coextensive edge strips of roof membranes covering the modules. The membrane comprises: an elastomeric adhesive layer having a tacky lower surface (14) and an oppositely facing upper surface (12); and it may include a porous reinforcing layer within the adhesive layer (paragraph [0016] lines 10-11); and a release strip (16) temporarily adhered to and covering the tacky lower surface of the adhesive layer. The release strip is removable from the adhesive layer to permit positioning of the membrane. The tape being sufficiently rigid transversely to form a self supporting bridge resistant to detrimental sagging if positioned over a gap." (Office Action, pp. 3-4).

However, this basis is not supported by Hubbard.

Claim 5 is an independent claim that relates to: "A tape to bridge a gap between adjacent building modules and to sealably engage adjacent generally coextensive edge strips of roof membranes covering the modules." Hubbard does not teach, disclose or even suggest that its single-ply membrane is capable of "bridging a gap between adjacent building modules" as asserted in the Office Action. What Hubbard teaches, in this regard, is that the membrane "is securely attached to a roof substrate comprising a roof deck of parapet wall or curb to form a water impervious structure" (P-0015, lines 1-4), or to a "smooth asphalt top surface" (P-0015, lines 7-8). Hubbard also does not teach, disclose or suggest that its single-ply membrane can be used to "to sealably engage adjacent generally coextensive edge strips of roof membranes covering the modules" as asserted in the Office Action. Indeed, Hubbard does not suggest anything concerning building modules, or sealing between the roof membranes on the building modules. The Hubbard membrane is applied to the roof deck structure, which would be the membrane applied to the roof deck of building modules, and which is therefore the membranes between which the tape according to the present invention is applied.

Claim 5 specifies: "an elastomeric adhesive layer ... [and] a porous reinforcing layer within the adhesive layer." Hubbard does not disclose a porous reinforcing layer within an adhesive layer. Instead, what Hubbard suggests is that the membranes "may or may not include reinforcing meshes or scrims intermediate layers 12 [the water impermeable membrane] and 14 [the hot-melt adhesive] of the material forming the single ply membrane" (paragraph [0016], lines 10-11). The common and ordinary meaning of the word "intermediate" is "between" or in a "middle position." Accordingly, Hubbard suggests that a reinforcing mesh may be between the two layers. Hubbard does not teach, disclose or suggest that its single-ply membrane "may include a porous reinforcing layer within the adhesive layer" as asserted in the Office Action.

It is noted that the common and ordinary meaning of the word "intermediate" as used in Hubbard relates to "between, is also acknowledged in the Office Action in relation to rejection of claims 7 and 14 (discussed in detail below). As noted above, Hubbard, at paragraph [0016] lines 10-11, reads: the membranes "may or may not include reinforcing meshes or scrims intermediate layers 12 [the water impermeable membrane] and 14 [the hot-melt adhesive] of the material forming the single ply membrane. In the Office Action in relation to rejection of claim 7, this has been properly interpreted as "Paragraph [0016] lines 10-11 describe a reinforcing mesh or scrim located between the layers..." In the Office Action in relation to rejection of claim 14, this has been properly interpreted as "the reinforcing mesh is located between layers 12 and 14."

Claim 5 further specifies: "the tape being sufficiently rigid transversely to form a self supporting bridge resistant to detrimental sagging into the gap between the building modules when positioned over the gap with the adhesive layer adhered to the edge strips of the roof membranes." In contrast, Hubbard does not teach, disclose or mention "a self supporting bridge resistant to detrimental sagging if positioned over a gap" as asserted in the Office Action. In fact, Hubbard does not mention anything in relation to a "gap" or an equivalent thereof. Therefore, there is absolutely no support in Hubbard for the assertion in the Office Action that the Hubbard tape is "sufficiently rigid transversely to form a self supporting bridge resistant to detrimental sagging if positioned over a gap."

In view of the fact that Hubbard does not anticipated each and every element of claim 5, either expressly or inherently, then Hubbard does not provide proper foundation for rejection of claim 5 under 35 UCS 102(e).

Claim 6:

Claim 6 specifies the tape of claim 5 with the reinforcing layer "comprising porous scrim material embedded within the adhesive layer."

The basis for the rejection of claim 6 in the Office Action reads:

"In regards to claim 6: The tape according to claim. 5 above, characterized by the porous reinforcing layer comprising porous scrim material embedded within the adhesive layer (paragraph [0016] lines 10-11)." (Office Action, p. 4).

However, as pointed out above, in relation to claim 5, Hubbard suggests, at most, a reinforcing mesh "between" the membrane and adhesive layers. Hubbard does not disclose the

elements as arranged in claim 6. In particular, Hubbard does not disclose the reinforcing layer embedded within the adhesive layer. Therefore, Hubbard does not provide proper foundation for rejection of claim 6 under 35 UCS 102(e).

Further, claim 6 depends from claim 5, and therefore, for the reasons explained above, Hubbard does not anticipate the additional elements thereof as incorporated into claim 6.

Claim 7:

Claim 7 specifies the tape of claim 6 with the "scrim material comprising an elongate strip of generally flat material having a multiplicity of interstices, with the adhesive layer extending through said interstices between said lower and upper surfaces."

The basis for the rejection of claim 7 in the Office Action reads:

"In regards to claim 7: The tape according to claim 6 above, characterized by the scrim material comprising an elongate strip of generally fiat material having a multiplicity of interstices, with the adhesive layer extending through said interstices between said lower and upper surfaces. Paragraph [0016] lines 10-11 describe a reinforcing mesh or scrim located between the layers wherein the adhesive layer goes between the opening of the mesh or scrim." (Office Action, p. 4).

However, as pointed out above, in relation to claim 5 (from which claim 6 depends), Hubbard suggests, at most, a reinforcing mesh "between" the membrane and adhesive layers. Hubbard does not disclose the elements as arranged in claim 7. In particular, Hubbard does not disclose the adhesive layer extending through the interstices of the scrim material. Therefore does not provide proper foundation for rejection of claim 6 under 35 UCS 102(e).

In other words, although paragraph [0016] lines 10-11 of Hubbard is correctly interpreted in the Office Action as describing "a reinforcing mesh or scrim located between the layers", there is no support in Hubbard for the follow-up conclusion stated in the Office Action that "wherein the adhesive layer goes between the opening of the mesh or scrim." Nothing in Hubbard, or in the ordinary meaning of a scrim "between" two layers support the conclusion that the adhesive layer goes "between the openings of the scrim."

Further, claim 7 depends from claim 6 which depends from claim 5, and therefore, for the reasons explained above, Hubbard does not anticipate the additional elements thereof in claim 7.

Claim 9:

Claim 9 specifies the tape of claim 6 characterized as "sufficiently flexible longitudinally to permit its being rolled for storage, shipment and handling, and unrolled for application and use." As noted above, Hubbard fails to anticipate the limitations of claim 6, and therefore also fails to anticipate the elements of claim 9 which depends from claim 6.

Claim 11:

Claim 11 specifies the tape according to claim 6 wherein the adhesive layer comprises at least one of the materials selected from the group consisting of EPDM, EPR, TPO, PVC, Neoprene, Butyl, Polyisobutylene, Halogenated Butyl, Halogenated Polyisobutylene, Isobutylene, reclaimed Butyl, natural rubber and Polydimethylsiloxane (PDMS). Contrary to the basis for the rejection of claim 11 in the Office Action (which reproduced Applicant's teachings in relation to the adhesive, not the teachings of Hubbard), among other things, Hubbard fails to anticipate the limitations of claim 6, and therefore also fails to anticipate the elements of claim 11 which depends from claim 6.

Claim 16:

Claim 16 specifies the tape of claim 5 with a protective outer layer permanently adhered to the upper surface of the adhesive layer. As noted above, Hubbard fails to anticipate the limitations of claim 5, and therefore also fails to anticipate each and every element of claim 16.

C. Claim Rejections - 35 USC 103

Claims 8, 10, 12-15 and 17-21 were rejected in the Office Action under 35 UCS 103(a) as unpatentable over Hubbard (US 2003/0219564).

Applicants respectfully request reconsideration and withdrawal of this rejection for the following reasons:

Whether under section 102 or 103, proper rejection of a claim requires that the prior art reference (or references when combined) must teach or suggest all the claim limitations. (See e.g., MPEP 2142, 2143.)

Claims 8, 10, 12-15 and 17

Without substantially belaboring the matter, claims 8, 10, 12-15 and 17 all depend from claim 5 through one or more intermediate claims. For the reasons stated above, Hubbard does not teach or suggest all of the limitations of claim 5 and additional applicable intermediate claims. Therefore, Hubbard does not teach or suggest all of the limitations of claims 8, 10, 12-15 and 17, or provide proper foundation for rejection of such claims under section 103(a).

In specific response to the suggestion of "obvious design choice" in relation to rejection of claims 12, 13 and 15; applicants disagree with the assertion that they have not disclosed that the claimed subject matter provides an advantage, is used for a particular purpose, or solves a stated problem. The advantages, particular purposes, and problems solved by the claimed subject matter are discussed at length in the specification and will be understood by those skilled in the art, including, but not limited to solving the stated problems and achieving the self-bridging tape according to the invention. However, since Hubbard does not provides proper foundation for the rejections, applicants are not obligated at this point to respond further to this additional basis for rejection, but expressly reserve the right to do so should the need arise.

In further response to the suggestion in the rejection of claim 13 that "One of ordinary skill in the art, furthermore, would have expected Hubbard's (sic) adhesive and applicant's adhesive to perform equally well with either the thickness taught by Hubbard or the claimed thickness because both dimensions would perform the same function of adhering to the roof." applicants respectfully note that, as explained in the specification, applicant's adhesive performs a function other than to simply adhere to a roof membrane. In considering the claimed invention, the invention as a whole must be considered, not a part selected by the examiner for expediency in supporting a claim rejection.

In specific response to the rejection of claim 14, Hubbard teach or suggests nothing concerning building modules, or bridging a gap of specified maximum width between building modules, or of the width of a reinforcing scrim in relation to such gap as recited in the claims. Applicant again notes, however, that this rejection correctly interprets the teaching of Hubbard in relation to the reinforcing mesh being located "between" the membrane and adhesive layers (as compared to within or embedded in the adhesive layer as specified in the claimed invention).

Claim 18.

Claim 18 is an independent claim, relating to a tape to bridge a specified maximum gap between adjacent building modules and to sealably engage adjacent generally coextensive edge strips of roof membranes covering the modules. Elements specified in the claim include:

- an elastomeric adhesive layer .. substantially equal in width to the specified maximum gap width plus the aggregate widths of the coextensive edge strips of the roof membranes;
- a porous reinforcing material embedded in the adhesive layer .. a multiplicity of interstices .. being of a width of at least approximately the specified maximum gap width and less than the width of the adhesive layer;
- the adhesive layer extending through the interstices of the reinforcing scrim ... ; and
- a release strip temporarily adhered to the lower surface of the adhesive layer ...;
- the adhesive layer with the reinforcing material embedded therein having a thickness of between approximately 0.040 to 0.060 inch and being sufficiently rigid transversely to form a self supporting bridge resistant to detrimental sagging into the gap between the building modules when positioned over the gap with the tacky lower surface adhered to the coextensive edge strips of the roof membranes;
- the adhesive layer with the reinforcing material embedded therein further being sufficiently flexible transversely to permit its selective deformation to generally conform to the angle between non-coplanar roof sections of building modules and adhesion of the tacky lower surface to the coextensive edge strips of roof membranes covering such roof sections, and
- the adhesive layer with the reinforcing material embedded therein further being sufficiently flexible longitudinally to be rolled for storage, shipment and handling, and unrolled for application over the gap between the building modules.

The Office Action, relying on Hubbard, recites much the same basis for rejection of claim 18 as noted above in relation to rejection of previous claims, and for the reasons described in detail above, applicants believe that rejection of claim 18 on this basis is not well founded. In particular, among other things, and contrary to the suggestions in the Office Action:

- Hubbard does not disclose, teach or suggest provision of a tape for a specified gap, and the attendant limitations in claim 18, but rather, discloses a roof membrane for adherence to a roof deck support structure;

- Hubbard does not disclose, teach or suggest a reinforcing layer "embedded" in the adhesive layer;

- the function of the adhesive in Hubbard's membrane and the adhesive in the claimed tape are not the same, for just sealing the roof, and specification thereof in the claimed invention is well supported in the specification and not a "mere design consideration"; and

- Hubbard does not disclose, teach or suggest anything concerning a self-supporting bridging tape, or the attendant flexure characteristics recited in the claims.

For all of the above reasons, Hubbard does not teach or suggest all the claim limitations, and therefore, is not proper foundation for rejection of claim 18.

Claims 19-21

Claims 19-21 all depend from claim 18. For all of the reasons discussed in detail above, Hubbard does not teach or suggest all of the limitations of claim 18, or claims 19-21. Therefore, Hubbard is not proper foundation for rejection of such claims under section 103(a).

Claims 22-27

For all of the reasons discussed above, Hubbard does not teach or suggest all of the elements of claims 5-21. Therefore, Hubbard in combination with the proposed reference does not render claims 22-27 obvious.

Further, the proposed reference is not dated more than one year prior to the priority date to which the present application is directed. The present application claims priority to provisional application filed on 11/01/2002, and the date of the reference is 11/01/2001.

Additional References:

Long (US 3,455,077) shows a joint sealing tape to compensate for expansion and contraction of wall joints. The tape has an elastic body with reinforced opposing edges for adherence to the walls on each side of the joint with the use of an adhesive applied therebetween, and a non-reinforced intermediate section for overlaying the joint. Long is concerned with provision of a tape in which curling is deterred while maintaining the elastic characteristic of the tape over the joint. (See e.g., col. 1, lines 47-50). Long teaches that (i) the section overlaying the joint is non-reinforced so as to be "stretchable in all directions" (see e.g., col. 1, lines 60-61); and (ii) reinforcement of the edges resists swelling, curling and buckling thereof, and a generally unsightly appearance that may be caused by certain adhesives, particularly those with solvents, used to apply the tape to the joint (see e.g., col. 2, lines 22-26).

Jentoft et al. (US 4,189,877) shows an expansion joint cover with an extruded vinyl strip, a pair of nailing strips embedded into the edges of the vinyl strip, a reinforcing strip bonded onto one side of the vinyl strip along the center thereof, and an insulative material bonded to the vinyl on top of the reinforcing strip.

Hartman (US 4,781,004) shows a system for connecting roof panels with a reinforced elastomeric sheet member spanning the joint between the panels. The sheet member is held in a configuration curved upwardly (away from the joint) by a bead of flowable material between the sheet member and a roof panel (i.e., under the sheet member). The edges of the sheet member are secured to the roof panels on each of the joint with a weld sealant. Expansion of the joint causes the sheet member straighten out which, in turn, causes the material of the bead to flow into space between the panels under the sheet member.

Sancaktar (US 4,965,119) shows a tape with a tapered edge for establishing a lap joint at overlapping edges of adjacent roof membranes.

White (US 5,251,416) shows a roofing system with panels of synthetic fiber reinforced rubber mats adhered over foam insulation boards. The panels are nailed to the roof deck. The system is sealed with reinforced rubber strips adhered over the joints between adjacent panels.

Matthews (US 6,110,565) shows a seaming tape for carpet. The tape includes a paper or cloth backing, an open mesh overlaying the backing, and elongated beads of sheet of hot-melt adhesive overlaying the mesh and backing. The tape is placed under a carpet seam, and upon application of heat on the carpet, the adhesive melts to adhere the backing and mesh to the carpet.

Sieber et al. (US 6,506,466) shows a multi-layer vapor barrier tape used to achieve an air tight seal at a roof purlin.

Thomsen et al. (US 6,591,557) shows a panel system for construction of a panel fillet or panel surface to be mounted in a pitched roof of a facade. The panel system includes fixed panels and openable panels with a frame structure, a profile element and a core element. A gasket or sealing bead is retained longitudinally between the panels.

None of these references, alone or in combination, teach or suggest the elements of the claimed invention.

Accordingly, applicants respectfully request reconsideration and withdrawal of the rejections, and allowance of the claims.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Keith Frantz", is written over a horizontal line.

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